

ABSTRACT

A deployable reflector of the invention includes connection members that bridge plural extendable structures constituting a deployable truss structure and connect portions corresponding to nodes of a buckling mode occurring in the extendable structures when a surface cable system is given tension, with portions corresponding to antinodes thereof. The surface cable system includes an internal surface cable system and a circumferential surface cable system connected to the outer circumference thereof. A cable used for the internal surface cable system is high in stiffness and small in ratio of length variation to tension variation. A cable used for the circumferential surface cable system is lower in stiffness and smaller in ratio of the tension variation to the length variation than that used for the internal surface cable system. Given tension by the deployable truss structure via the circumferential surface cable system, the internal surface cable system forms predetermined surface shape.